

REMARKS

Applicant thanks the Examiner for acknowledging the claim for priority under 35 U.S.C. § 119, and receipt of a certified copy of the priority document submitted August 6, 1999.

Applicant also thanks the Examiner for considering the references cited with the Information Disclosure Statements filed August 6, 1999 and December 30, 1999.

Applicant also thanks the Examiner for indicating that the Formal Drawings filed May 15, 2003 are accepted.

Applicant also thanks the Examiner for acknowledging the election without traverse of claims 1-6, 10-15 and 19-22 in the Response to Restriction Requirement filed May 15, 2003.

Applicant also thanks the Examiner for briefly discussing the instant Application with Applicant's representatives via telephone on August 13, 2003. During the teleconference, the Examiner confirmed that the rejection of claims 21 and 22 was in error, as they are dependent from allowable claim 20.

Status of the Application

Claims 1-6, 10-15 and 19-43 are all the claims pending in the Application, as claims 23-43 are hereby added to provide more varied protection for the current invention, and as non-elected claims 7-9 and 16-18 are hereby cancelled without prejudice or disclaimer. Claims 1, 3, 4, 10, 12, 13 and 19 have been rejected.

Allowable Subject Matter

Applicant thanks the Examiner for indicating in the instant Office Action that claims 2, 5, 6, 11, 14, 15 and 20 would be allowed if rewritten in independent form. Applicant also thanks

the Examiner for indicating in the teleconference discussed above that claims 21 and 22 would also be allowed if rewritten in independent form.

Applicant has rewritten these claims in independent form as new claims 35-43, which are believed to be immediately allowable.

Anticipation Rejection

The Examiner has rejected claims 1, 10 and 19 under 35 U.S.C. § 102(e) as being alternatively anticipated by Koike (US 5,550,647; hereinafter "Koike") or Yamakawa (US 6,014,462; hereinafter "Yamakawa"). This rejection is respectfully traversed.

Koike

Koike discloses an image processing apparatus designed to improve the picture quality of halftone image portions of a scanned composite image (*i.e.*, an image containing both bi-level and halftone portions) when it is modified into a bi-level output.

Specifically, in the embodiment cited by the Examiner (see FIG. 18) Koike discloses a line sensor 1101 and an A/D converter 1102 that respectively read and convert a line of a multilevel image into a multilevel digital image signal. Additionally, a gamma corrector 1103 is provided and performs a gamma correction process on the multilevel digital image signal. Gamma corrector 1103 is performed using a gamma table specification stored in memory part 1104. (Col. 12, lines 1-21). The image signal is then supplied to: (1) MTF corrector 1106 / bi-level rendition part 1107; (2) halftone rendition part 1108; and (3) region discriminator 1109.

MTF corrector 1106 / bi-level rendition part 1107 and halftone rendition part 1108 then produce bi-level signals BW and BX, respectively, while region discriminator 16 detects whether

the image signal lies in a halftone region of the input image or in a non-halftone region thereof, and outputs a region detect signal KK. The image synthesizer 1110 then selects which bi-level signal BW and BX it wants to reproduce in accordance with the region detect signal KK (i.e., if KK indicates a halftone region, synthesizer 1110 will utilize signal BX) (see col. 10, lines 23-63).

Yamakawa

Yamakawa discloses another image processing apparatus directed towards a technique for adapting image processing dependent upon the scanned image (*i.e.*, Yamakawa applies different parameters for alphanumeric data, images, and patterns).

Specifically, Yamakawa discloses (see FIG. 1) an image processing apparatus 100 including an original reading unit 101 for reading image data, an image processing unit 102 for providing various corrective processing to the read image, and an image recording unit 103 for recording an image on a recording sheet.

The image processing unit 102 is shown in more detail in FIG. 2, and includes, *inter alia*, an original recognition unit 202 that determines regions of alphanumeric symbols and patterns in the image in order to output a C/P signal, a color correction unit 205 that converts RGB data into CMY data, and an UCR unit 206 that generates Bk data. A CMYBk gamma correction unit 209 is also provided to perform a gamma correction on the CMYBk data, and a halftone processing unit 210 performs quantization operations such as dither-matrix and error diffusion processings on the gamma-corrected output. (Col. 4, lines 4-34).

The C/P signal output from the original recognition unit 202 is a two-bit signal and represents image regions of, for example, alphanumeric symbols by 3, alphanumeric symbols on patterns by 1, and patterns by 0. (Col. 4, lines 35-39).

The CMYBk gamma correction unit 209 performs a gamma curve change operation in accordance with a frequency characteristic of the image recording unit 103 and a value of the C/P signal. For example, a gamma curve for faithfully reproducing an image is used when the C/P signal is 0 and a raised gamma curve for emphasizing contrast is used when the C/P signal is other than 0. (Col. 5, lines 11-17).

The Examiner's Position and Applicant's Response

The Examiner takes the position that column 13, lines 6-21 of Koike and/or column 4, lines 28-34 of Yamakawa disclose the features recited in independent claims 1, 10 and 19.

In contrast, Applicants respectfully submit that neither Koike nor Yamakawa teach or suggest the features of “a storage, operable to rewritably store tone correction information,” as recited in claim 1, or the step of “storing tone correction information rewritably in a storage,” as recited in claims 10 and 19.

More specifically, Applicants respectfully submit that neither Koike nor Yamakawa teach, suggest, or even remotely comprehend any provision for “rewriting” tone correction information stored therein.

Koike only applies a gamma correction process according to a single “gamma table specification,” and fails to teach or suggest that such a “gamma table specification” is anything other than a single fixed table. Thus, no “rewriting” of tone correction information is disclosed or even remotely suggested. Further, Yamakawa only discloses that gamma correction unit 209

applies a tone correction for compensating for gamma characteristic variations of a particular scanned image, not the device. Thus, again, no “rewriting” of tone correction information is disclosed or even remotely suggested.

Thus, Applicant respectfully submits that independent claims 1, 10 and 19 are patentable over both Koike and Yamakawa. Further, Applicant respectfully submits that dependent claims 2-6, 11-15, and 20-22 are allowable, *at least* by virtue of their dependency.¹

Thus, Applicants respectfully request that the Examiner withdraw this rejection.

Obviousness Rejection

The Examiner has rejected claims 3, 4, 12 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Koike or Yamakawa in view of Applicant’s admitted prior art (hereinafter “AAPA”). This rejection is respectfully traversed.

Applicants respectfully submit that the AAPA fails to teach or suggest the features noted above that are: (1) recited in independent claims 1, 10 or 19; and (2) missing from Koike and Yamakawa.

Accordingly, Applicants respectfully submit that claims 3, 4, 12 and 13 are allowable, *at least* by virtue of their dependency from independent claims 1 and 10.

New Claims

Claims 23-43 are hereby added. Claims 23-34 are fully supported *at least* by pages 6-9 and 13 of the instant Application, and are respectfully submitted to be allowable *at least* by

¹ Or, in the case of claims 2, 5, 6, 11, 14, 15, 20, 21 and 22, the Examiner’s previous indication of allowability.

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virtue of their dependency. Claims 35-43 correspond to allowable dependent claims 2, 5, 6, 11, 14, 15 and 20, rewritten in independent form, and are therefore believed to be immediately allowable.

Conclusion

In view of the foregoing, it is respectfully submitted that claims 1-6, 10-15 and 19-43 are allowable. Thus, it is respectfully submitted that the application now is in condition for allowance with all of the claims 1-6, 10-15 and 19-43.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Please charge any fees which may be required to maintain the pendency of this application, except for the Issue Fee, to our Deposit Account No. 19-4880.

Respectfully submitted,



Timothy P. Cremen
Registration No. 50,855

SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3213
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

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